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December 12, 2005

To: Examiner Kwang B. Yao
USPTO

Facsimile No.: 571-273-8300

From: Robert A. Molan

Number of Pages (including cover sheet: 12

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December 12, 2005

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Subject: Application of Sander
Titled: Multi-Mode Communications Transmitter
Application No. 10/045,199
Filed: October 22, 2001

Dear Mr. McCune:

Enclosed please find the original of an Office Action from the United States Patent and Trademark Office in the above-identified application. We inadvertently received this Office Action because it incorrectly associates one of our attorney docket numbers, i.e., 839-1641, with this application. Since your Company now appears to be the assignee of record for this application, I am forwarding the enclosed Office Action to you.

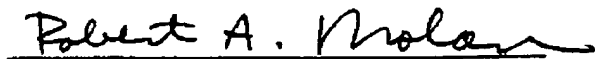
Please note that I tried to contact Examiner Kwang B. Yao, the Examiner handling this application, to advise him of the error of associating this application with my Firm; however, I have, so far, been unsuccessful in contacting him. You may wish to pursue this matter further with Examiner Yao to correct the record in this application so that it is properly associated with you and your attorneys.

If you have any questions regarding my forwarding of this Office Action to you, please do not hesitate to let me know if we can be of further assistance to you.

Very truly yours,

NIXON & VANDERHYE P.C.

By:



Robert A. Molan

RAM:dt

cc: USPTO Examiner Kwang B. Yao (via facsimile w/encl.)
Larry S. Nixon, Esq.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/045,199	10/22/2001	Brian Sander	039-1641	2287

30024 7590 12/07/2005

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EXAMINER

YAO, KWANG BIN

ART UNIT

PAPER NUMBER

2667

DATE MAILED: 12/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

100-278900-152

Office Action Summary

Application No.

10/045,199

Applicant(s)

SANDER ET AL.

Examiner

Kwang B. Yao

Art Unit

2667

— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

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Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-59 is/are pending in the application.
- 4a) Of the above claim(s) 37-59 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,11-13,15,17-20,29-31,33,35 and 36 is/are rejected.
- 7) ☒ Claim(s) 3-10,14,16,21-28,32 and 34 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 11-13, 15, 17-20, 29-31, 33, 35, 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walton et al. (US 2002/0154705) in view of Chillariga et al. (US 2002/0122406).

Walton et al. discloses a communication system comprising the following features:

regarding claim 1, a method of multi-mode RF communications, comprising: during a first timeslot (FIG. 2, ts2), transmitting a first communications signal in accordance with one of a first communications standard using constant-envelope modulation (8-PSK; page 8 [0092]) and a second communications standard using varying-envelope modulation (16-QAM; page 8 [0092]); and during a second adjacent timeslot (FIG. 2, ts3), transmitting the same in accordance with a different one of said first communications standard and said second communications standard;

regarding claim 2, comprising independently setting a power level (page 13, [0137]) of the communications signal in the first and second timeslots (FIG. 2, ts2, ts3); regarding claim 13, wherein the varying-envelope modulation (16-QAM; page 8 [0092]) is QAM; regarding claim 15, wherein the varying-envelope modulation (16-QAM; page 8 [0092]) is QAM; regarding claim 19, an apparatus for multi-mode RF communications, comprising: means for, during a first

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timeslot (FIG. 2, ts2), transmitting a first communications signal in accordance with one of a first communications standard using constant-envelope modulation (8-PSK; page 8 [0092]) and a second communications standard using varying-envelope modulation (16-QAM; page 8 [0092]); and means for, during a next adjacent timeslot (FIG. 2, ts3), transmitting the same in accordance with a different one of said first communications standard and said second communications standard; regarding claim 20, comprising means for independently setting a power level (page 13, [0137]) of the communications signal in the first and second timeslots (FIG. 2, ts2, ts3); regarding claim 31, wherein the varying-envelope modulation (16-QAM; page 8 [0092]) is QAM; regarding claim 33, wherein the varying-envelope modulation (16-QAM; page 8 [0092]) is QAM. See pages 1-14.

Walton et al. does not disclose the following features: regarding claim 1, ramping down the first communications signal at the end of the first timeslot; during a second adjacent timeslot, ramping up a second communications signal; regarding claim 11, wherein the constant-envelope modulation is GMSK, and a GMSK signal is formed; regarding claim 12, wherein a ramp shape for the GMSK signal is determined in accordance with a pulse shape used to generate a communications signal in accordance with the EDGE standard; regarding claim 13, the second communications standard is EDGE, and an EDGE signal is formed; regarding claim 15, the second communications standard is EDGE, and an EDGE signal is formed; regarding claim 17, wherein the constant-envelope modulation is GMSK, and a GMSK signal is formed; regarding claim 18, wherein a ramp shape for the GMSK signal is determined in accordance with a pulse shape used to generate a communications signal in accordance with the EDGE standard; regarding claim 19, means for ramping down the first communications signal at the end of the

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first timeslot; and means for, during a next adjacent timeslot, ramping up a second communications signal; regarding claim 29, wherein the constant-envelope modulation is GMSK, and a GMSK signal is formed; regarding claim 30, wherein a ramp shape for the GMSK signal is determined in accordance with a pulse shape used to generate a communications signal in accordance with the EDGE standard; regarding claim 31, the second communications standard is EDGE, and an EDGE signal is formed; regarding claim 33, and the second communications standard is EDGE, and an EDGE signal is formed; regarding claim 35, wherein the constant-envelope modulation is GMSK, and a GMSK signal is formed; regarding claim 36, wherein a ramp shape for the GMSK signal is determined in accordance with a pulse shape used to generate a communications signal in accordance with the EDGE standard.

Chillariga et al. discloses a communication system comprising the following features: regarding claim 1, ramping (page 2, [0013], [0016]; page 12, [0122]; page 13, [0130]) down the first communications signal at the end of the first timeslot; during a second adjacent timeslot, ramping (page 2, [0013], [0016]; page 12, [0122]; page 13, [0130]) up a second communications signal; regarding claim 11, wherein the constant-envelope modulation is GMSK (PAGE 4, [0033]), and a GMSK (PAGE 4, [0033]) signal is formed; regarding claim 12, wherein a ramp shape for the GMSK (PAGE 4, [0033]) signal is determined in accordance with a pulse shape used to generate a communications signal in accordance with the EDGE (page 4, [0033]; page 12, [0121]) standard; regarding claim 13, the second communications standard is EDGE (page 4, [0033]; page 12, [0121]), and an EDGE (page 4, [0033]; page 12, [0121]) signal is formed; regarding claim 15, the second communications standard is EDGE (page 4, [0033]; page 12, [0121]), and an EDGE (page 4, [0033]; page 12, [0121]) signal is formed; regarding claim 17,

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wherein the constant-envelope modulation is GMSK (PAGE 4, [0033]), and a GMSK (PAGE 4, [0033]) signal is formed; regarding claim 18, wherein a ramp shape for the GMSK (PAGE 4, [0033]) signal is determined in accordance with a pulse shape used to generate a communications signal in accordance with the EDGE (page 4, [0033]; page 12, [0121]) standard; regarding claim 19, means for ramping (page 2, [0013], [0016]; page 12, [0122]; page 13, [0130]) down the first communications signal at the end of the first timeslot; and means for, during a next adjacent timeslot, ramping (page 2, [0013], [0016]; page 12, [0122]; page 13, [0130]) up a second communications signal; regarding claim 29, wherein the constant-envelope modulation is GMSK (PAGE 4, [0033]), and a GMSK (PAGE 4, [0033]) signal is formed; regarding claim 30, wherein a ramp shape for the GMSK (PAGE 4, [0033]) signal is determined in accordance with a pulse shape used to generate a communications signal in accordance with the EDGE (page 4, [0033]; page 12, [0121]) standard; regarding claim 31, the second communications standard is EDGE (page 4, [0033]; page 12, [0121]), and an EDGE (page 4, [0033]; page 12, [0121]) signal is formed; regarding claim 33, and the second communications standard is EDGE (page 4, [0033]; page 12, [0121]), and an EDGE (page 4, [0033]; page 12, [0121]) signal is formed; regarding claim 35, wherein the constant-envelope modulation is GMSK (PAGE 4, [0033]), and a GMSK (PAGE 4, [0033]) signal is formed; regarding claim 36, wherein a ramp shape for the GMSK (PAGE 4, [0033]) signal is determined in accordance with a pulse shape used to generate a communications signal in accordance with the EDGE (page 4, [0033]; page 12, [0121]) standard. See pages 1-16. It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Walton et al., by using the features as taught by Chillariga et al., in order to provide an efficient communication system by improving process that permits

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fast macro diversity switching in an environment of timing advance that helps achieve the objectives of improved performance and higher density of MSs. See Chillariga et al., page 4, [0035].

Allowable Subject Matter

3. Claims 3-10, 14, 16, 21-28, 32, 34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

4. Applicant's arguments filed 9/26/05 have been fully considered but they are not persuasive.

On page 19, second paragraph, Applicant argues that Chillariga et al. provides no teaching or suggestion of ramping a first communication signal at the end of a first time slot in accordance with a first or second communication standard and ramping up a second communications signal with a different one of said first and second communications standard. Examiner respectfully disagrees with these arguments. It is noted that Walton et al. discloses the following features: during a first timeslot (FIG. 2, ts2), transmitting a first communications signal in accordance with one of a first communications standard using constant-envelope modulation (8-PSK; page 8 [0092]) and a second communications standard using varying-envelope modulation (16-QAM; page 8 [0092]); and during a second adjacent timeslot (FIG. 2, ts3), transmitting the same in accordance with a different one of said first communications

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standard (8-PSK; page 8 [0092]) and said second communications standard (16-QAM; page 8 [0092]). Chillariga et al. discloses the following features: regarding claim 1, ramping (page 2, [0013], [0016]; page 12, [0122]; page 13, [0130]) down the first communications signal at the end of the first timeslot; during a second adjacent timeslot, ramping (page 2, [0013], [0016]; page 12, [0122]; page 13, [0130]) up a second communications signal. Therefore, it is respectfully maintained that the combined references of Walton et al. and Chillariga et al. would have been obvious to arrive the claimed invention.

On page 19, last paragraph, to page 20, first and second paragraph, Applicant argues that Chillariga et al. is not analogous prior art to Walton et al.; and Chillariga et al. does not teach subject matter that is reasonably pertinent to the particular problem that the present invention is concerned. Examiner respectfully disagrees with these arguments. It has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, It is noted that the reference of Walton et al. and the reference of Chillariga et al. are analogous, because they are in the same field of endeavor (e.g., wireless communication). Therefore, it is respectfully maintained that the combined references of Walton et al. and Chillariga et al. would have been obvious to arrive the claimed invention.

Conclusion

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5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kwang B. Yao whose telephone number is 571-272-3182. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi H. Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KWANG BIN YAO
PRIMARY EXAMINER


Kwang B. Yao
December 2, 2005

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